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15 March 2002

Anton Caratan
Anton Caratan & Son
1625 Road 160
Delano, CA 93215

Dear Mr. Caratan,

On October 24, 2001, we received leaf samples contained in four envelopes labeled as follows:

Blanc, Row 273, Vine#28
Blanc, Row 278, Vine#22
Margaux, Row 258, Vine#5
Margaux, Row 259, Vine#3.

We treated the four envelopes as separate samples and extracted DNA from leaves of each envelope. On the enclosed sheet please find the DNA profile for these samples.

The DNA was typed with 10 grape microsatellite DNA markers. The consensus in the grape genetics research community is that 6 such markers are sufficient to differentiate all grape varieties except sports, so the use of 10 markers provides a very high degree of confidence that the profiles we have obtained are unique to your varieties.

Yours truly,

Jerry Dangl
Staff Research Associate

Meredith Lab, University of California, Davis 15 March 2002

Allele sizes in base pairs for 10 microsatellite DNA markers

Sample Name	VVS2*	VVMD5*	VVMD7*	VVMD27*	VrZAG62*	VrZAG79*	VVMD6	VVMD28	VVMD31	VVMD32
Blanc, Row 273, Vine#28	135 151	228 236	239 249	181 194	187 189	247 257	214 ---	261 ---	212 ---	253 265
Blanc, Row 278, Vine#22	135 151	228 236	239 249	181 194	187 189	247 257	214 ---	261 ---	212 ---	253 265
Margaux, Row 258, Vine#5	135 151	228 236	249 ---	181 194	187 205	247 ---	214 ---	261 ---	212 220	265 273
Margaux, Row 259, Vine#3	135 151	228 236	249 ---	181 194	187 205	247 ---	214 ---	261 ---	212 220	265 273

*The 6 markers indicated by an asterisk have been adopted by the European Union Grape Genetic Resources Working Group and the Meredith Lab as common markers to facilitate exchange of data among grape research laboratories.

Note: The base pair numbers used to designate grape microsatellite alleles may differ slightly between laboratories because of diff rences in methodology. Non-numerical allele designations have not yet been adopted by the grape genetics research community. Adjustments for inter-laboratory differences can be made by referencing common cultivars that have the same alleles as the samples being analyzed. The alleles indicated above are also observed in the following cultivars:

Marker	Allele	Reference cultivars
VVS2	135	Muscat Hamburg (small allele), Dattier (large allele)
	151	Thompson Seedless (large), Flame Seedless (large)
VVMD5	228	Crimson Seedless (small), Ruby Seedless (small)
	236	Crimson Seedless (large), Ruby Seedless (large)
VVMD7	239	Thompson Seedless (small), Flame Seedless (small)
	249	Crimson Seedless (large), Ruby Seedless (large)
VVMD27	181	Thompson Seedless (small), Flame Seedless (small)
	194	Thompson Seedless (large), Ruby Seedless (only allele)
VrZAG62	187	Dattier (small), Muscat of Alexandria (small)
	189	Thompson Seedless (only allele), Perlette (small)
	205	Perlette (large), Ruby Seedless (large)

Marker	Allele	Reference cultivars
VrZAG79	247	Thompson Seedless (small), Perlette (small)
	257	Ruby Seedless (small), Grenache (only allele)
VVMD6	214	Muscat of Alexandria (large), Muscat Hamburg (large)
VVMD28	261	Dattier (large allele), Carignane (large)
VVMD31	212	Flame Seedless (only allele), Perlette (only allele)
	220	Crimson Seedless (large), Ruby Seedless (large)
VVMD32	253	Thompson Seedless (only allele), Perlette (small)
	265	Crimson Seedless (large), Ruby Seedless (large)
	273	Perlette (large), Flame Seedless (large)

Please type a plus sign (+) inside this box → [+]

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PLANT COLOR CODING SHEET

(to be used for new applications only)

Sheet	1	of	1

Attorney Docket Number	W-3942
First Named Inventor	JOSEPH MARANTO
FOR OFFICIAL USE ONLY	
Date of Receipt	
Application Number	

PLEASE LIST THE ITEM TO WHICH COLOR IS A DISTINGUISHING FEATURE, THE COLOR CODE WHICH BEST REPRESENTS THAT PLANT STRUCTURE AND THE COLOR CODE SYSTEM.

ITEM		COLOR
TRUNK:	Bark:	Dark brown (8-E-11)
	Underbark:	Medium brown (7-C-12 India Tan)
	Mature canes:	Raw Sienna (13-L-10)
LEAVES:	Dorsal surface:	Dark green (24-L-7)
	Ventral surface:	Light green (23-L-7)
	Leaf vein - midrib:	Grape green (21-J-1)
FLOWERS:	Pistils:	Light green (22-L-4 Calla green)
FRUIT:	Skin:	Light green (21-K-2) and amber yellow (10-J-3)

COLOR CODE SYSTEM:	Dictionary of Color, Maerz & Paul, 1st Edition, 1930.

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